

REMARKS

Claims 1-53 remain pending in this application for consideration. Submitted concurrently with this response is a Petition for Extension of Time under 37 C.F.R. § 1.136(a), along with the requisite fee.

Rejections Under 35 U.S.C. § 102 and § 103

In the Office Action, the examiner rejected claims 1, 3-4, 11, 13-14, 20-23, 25-26, 28-31, 33, 36, 38-40, 42, 45-47, and 49 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,238,897 to *Georgiadis et al.* ("Georgiadis"), and rejected claims 2, 5-10, 12, 15-19, 24, 27, 32, 34-35, 37, 41, 43-44, 48, and 50-53 under 35 U.S.C. § 103 as being obvious over *Georgiadis* in view of U.S. Patent No. 6,108,782 to *Fletcher et al.* ("Fletcher"). For the following reasons, Applicant respectfully traverses the examiner's rejections.

Claimed Invention

The present invention is directed to a network and method for sharing server statistics (also referred to as "load distribution data") between redirection processors (also referred to as "load processors" or "address processors") located at geographically disparate locations. An exemplary embodiment of the invention is shown in FIG. 4 of the application. As seen in FIG. 4, the network includes a plurality of perimeter redirection processors (78a, 78b and 78c) connected to first and second data centers A and B (82a and 82b) via a wide area network (84). Data center A (82a) includes a local redirection processor (86a) associated with a plurality of application servers (70), and data center B (82b) includes a local redirection processor (86b) associated with a plurality of application servers (70). Significantly, the redirection processors (86a, 86b, 78a, 78b and 78c) are located at geographically disparate locations within the network.

In operation, the local redirection processor (86a) collects server statistics from the application servers (70) located within data center A (82a), and the local redirection processor (86b) collects server statistics from the application servers (70) located within data center B (82b). Each of the local redirection processors (86a and 86b) then transmit information responsive to such server statistics over the wide area network (84) to one or more of the perimeter redirection processors (78a, 78b and 78c) and to the local redirection processor located at the other data center. Based on the server statistics residing on the local and perimeter redirection processors, an Internet Protocol (IP) request (such as an IP request originating from laptop computer (72)) may be directed through the network to the application server (70) that is most responsive for receiving the IP request. In this manner, the local and perimeter redirection processors are able to direct IP requests to all available application servers (70) so as to achieve efficient load balancing.

In one aspect of the invention, a first redirection processor (such as local redirection processor (86a)) is associated with at least one application server (such as one of the servers (70) located within data center A (82a)). A second redirection processor (such as perimeter redirection processor (78a)) is located at a geographically disparate location from the first redirection processor. In operation, the first redirection processor collects server statistics from the application server, and transmits information responsive to such server statistics to the second redirection processor.

In another aspect of the invention, a first redirection processor (such as local redirection processor (86a)) is associated with a plurality of application servers (such as all of the servers (70) located within data center A (82a)). A second redirection processor (such as perimeter redirection processor (78a)) is located at a geographically disparate location from the first

redirection processor. In operation, the first redirection processor collects server statistics from all of the application servers, and transmits information responsive to such server statistics to the second, geographically disparate, redirection processor. An IP request may then be directed through the network to one of the application servers in response to the server statistics residing on the first and second redirection processors.

In yet another aspect of the invention, a plurality of geographically disparate redirection processors (such as local redirection processor (86a), local redirection processor (86b), and all of perimeter redirection processors (78a, 78b and 78c)) are provided in a plurality of network traffic paths. Each of the redirection processors is operable to receive server statistics from any of the other redirection processors. A plurality of application servers (such as all of the servers (70) located within data center A (82a) and all of the servers (70) located within data center B (82b)) are connected to the plurality of network traffic paths. In operation, the redirection processors direct network traffic to particular application servers in response to the server statistics.

Independent Claims

Independent claim 1 of the present application includes the limitation “wherein said second redirection processor is located at a geographically disparate location from said first redirection processor.” Similarly, independent claim 11 includes the limitation “a second redirection processor located at a geographically disparate location from the first redirection processor”, independent claim 20 includes the limitation “a second load processor located at a geographically disparate location from the first load processor”, independent claim 28 includes the limitation “providing a second load processor located at a geographically disparate location from the first load processor”, independent claim 38 includes the limitation “a plurality of

geographically disparate address processors in a plurality of network traffic paths”, and independent claim 45 includes the limitation “wherein said second address processor is located at a geographically disparate location from said first address processor”. As can be seen, every independent claim of the present application includes a “geographically disparate” limitation.

The examiner rejected claims 1, 3-4, 11, 13-14, 20-23, 25-26, 28-31, 33, 36, 38-40, 42, 45-47, and 49 under 35 U.S.C. § 102 as being anticipated by *Georgiadis*. *Geordiadis* discloses a semi-dynamic load balancer in which an algorithm is employed to route transactions in groups to specific computers based upon the type of transactions being processed (*see, e.g.*, Abstract of *Georgiadis*). *Georgiadis*, however, does not disclose redirection or load processors (or “front end computers” as they are referred to in *Georgiadis*) at geographically disparate locations, as required in each and every claim of the present application.

The examiner cites to column 6, lines 38-41 of *Georgiadis* as implicitly supplying the “geographically disparate” limitation in the language “establishes connections through communication links with other workload managers”. Applicant respectfully disagrees.

First, the examiner has stated that the “geographically disparate” limitation is “implicit” (i.e., “implied”) in the disclosure of *Georgiadis*. This is not the proper standard for anticipation. As stated in MPEP § 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. There is no standard of anticipation by an “implied” limitation.

Even assuming for the sake of argument that anticipation could be established by an “implied” limitation, the language of *Georgiadis* cited by the examiner does not imply the “geographically disparate” limitation of the claims of the present application. The cited language simply indicates that more than one front-end computer can communicate (via communication

links) to other front-end computers. There is absolutely no implication in the “communication links” language to lead one to believe that the front-end computers must be located at geographically disparate locations as is required in all of the claims of the present application. In fact, the entirety of the *Georgiadis* disclosure is in the context of a single data center. There is absolutely nothing in *Georgiadis*, implied or explicit, that suggests front-end computers at geographically disparate locations.

Second, assuming that the examiner meant that the “geographically disparate” limitation was inherent in the cited language, this is also not true. The word “inherent” means “existing as an essential constituent or characteristic; intrinsic. (*The American Heritage® Dictionary of the English Language, Fourth Edition*). The “geographically disparate” limitation is not, of course, an essential part of the cited “communication links.” Communications links between computers in a single facility are commonplace, in fact the entire disclosure of *Georgiadis* is in reference to such co-located computers.

Since the “geographically disparate” limitation of every claim of the present application is not disclosed, either expressly, inherently, or even impliedly, in *Georgiadis*, that reference does not anticipate independent claims 1, 11, 20, 28, 38, and 45 of the present application, and the examiner’s rejection should be withdrawn.

Furthermore, there is no teaching, suggestion, or disclosure in *Georgiadis* that would lead one of skill in the art to consider locating the front-end computers described therein at geographically disparate locations. As discussed in *Georgiadis*, the semi-dynamic load balancer of *Georgiadis* is suitable for transaction processing systems, such as airline reservation systems, in which numerous remote terminals transmit multiple transaction requests to a single, central location (see Background of *Georgiadis*, column 1). There is simply no teaching, suggestion, or

disclosure in *Georgiadis* of the processing portion of the system (i.e., the front-end computers) being at geographically disparate locations as required in all claims of the present application.

Similarly, *Fletcher* does not teach, suggest, or disclose load or redirection processors at geographically disparate locations.

Claims 2-10, 12-19, 21-27, 29-37, and 39-44 depend from claims 1, 11, 20, 28, 38, and 45, respectively. Since claims 1, 11, 20, 28, 38, and 45 are allowable for the reasons discussed above, claims 2-10, 12-19, 21-27, 29-37, and 39-44 are thus also allowable, and the examiner's rejection should be withdrawn.

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In view of the foregoing remarks, it is respectfully submitted that all pending claims of the application are in condition for allowance and eventual issuance. Such action is respectfully requested. Should the examiner have any further questions or comments which need be addressed in order to obtain allowance, he is invited to contact the undersigned attorney at the number listed below.

Acknowledgement of receipt is respectfully requested.

Respectfully submitted,

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